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EXAMING THE IMPACT OF SMALL BUSINESS INSTITUTE PARTICIPATION ON ENTREPRENEURIAL ATTITUDES

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ABSTRACT

Students enrolled in the Small Business Institute® (SBI) at six universities completed the Entrepreneurial Attitudes Orientation survey. A pre-test was administered during the first week of the semester followed by a post-test at the conclusion of the semester to determine if participation in the course affected students' entrepreneurial attitudes. Past research suggests that an "entrepreneurial perspective" can be developed in individuals, and that a primary focus of entrepreneurship education is the development of positive attitudes. Results strongly supported the notion that completion of the SBI course had a major impact on students' entrepreneurial attitudes. Furthermore, a significant interaction effect was found such that women's attitudes were significantly strengthened by completing the course.

INTRODUCTION

Successful entrepreneurs often possess a variety of skills and talents that enable them to identify and capitalize on opportunities within the marketplace. As noted in the Global Entrepreneurship Monitor's 2006 Results Report, the entrepreneurial spirit is alive and well throughout the world. Interestingly, however, past research indicates that many more people have entrepreneurial potential than ever actually become entrepreneurs (Kent, 1990).

Prior entrepreneurial experiences often play a critical role in the development of entrepreneurial skills, but many of these skills can also be developed and refined within the framework of entrepreneurship education and training courses (Mitra and Matlay, 2004). As suggested by Zimmer and Scarborough (1998), entrepreneurship is not a genetic trait but a "learned skill." Past research has shown that entrepreneurship education can improve the perceptions of nascent entrepreneurs towards the feasibility of their business ideas, as well as provide them with a more complete skill set (Gatewood, Shaver, Powers, and Gartner, 2002). In addition to the acquisition of general business skills and knowledge, Florin, Karri, and Rossiter (2007) have encouraged business schools to help foster and develop entrepreneurial drive in all

students. Despite some evidence indicating the many advantages of entrepreneurship education programs, educators are still uncertain as to the real impact of these programs. One area of potential interest is the degree to which education programs positively impact the development of entrepreneurial attitudes (Florin, Karri, and Rossiter, 2007).

Past research on entrepreneurial intentions tended to focus on trait or personality characteristics (McClelland, 1961; Wortman, 1987; Hansemark, 2003), behavioral and situational factors (Gartner, 1985), and demographic variables (Gasse, 1985; Davidsson, 1995; Ede, Panigrahi, and Calcich, 1998). The work of Robinson, Stimpson, Huefner, and Hunt (1991) was one of the first to use an attitudinal scale to predict entrepreneurial activity. Attitudes tend to change across time and situations through an interactive process with the environment, and once a person's attitude has been measured, a prediction can be made about the person's future actions (Carlson, 1985). Florin, Karri, and Rossiter (2007) suggested that attitudes are more likely to be influenced by educational programs than are personality traits because they are learned and/or experience based. Based on prior research on personality, attitudes, and entrepreneurship, Robinson, Stimpson, Huefner, and Hunt (1991) developed the Entrepreneurial Attitude Orientation (EAO) model to measure entrepreneurial attitudes. The subscales of the EAO measure individuals' attitudes on four constructs: (1) achievement in business (referring to the results of starting and growing a business venture); (2) innovation in business (using innovative methods in business activities); (3) perceived personal control of business outcomes (individual's control and influence on his/her business); and (4) perceived self-esteem in business (self-confidence and perceived competency in business affairs).

LITERATURE REVIEW

Prior research has examined various personality and attitudinal constructs in the field of entrepreneurship, though not in tandem as proposed by Robinson et al. (1991). McClelland (1961) and Collins, Hanges, and Locke (2004) asserted that need for achievement is a strong entrepreneurial trait, and Gasse (1985) and Hansemark (2003) found that entrepreneurs often possess a greater internal locus of control than the general population. Higher self-efficacy has also been associated with entrepreneurship and business creation (Krueger and Brazeal, 1994; Erickson, 2002; Frazier and Niehm, 2006). In addition, research has suggested that entrepreneurs have a high level of self-esteem and confidence (Robinson, 1987), demonstrate greater initiative and innovation (Bateman and Grant, 1993; Stewart, Watson, Carland, and Carland, 1999), and possess positive attitudes toward risk and independence (Douglas and Shepherd, 2002; McMullen and Shepherd, 2006). Although entrepreneurs tend to be more self-confident, some studies have shown that self-confidence and motivation can be affected by past failures (Gatewood and Shaver, 1991; Busenitz, 1999).

The theory of planned behavior argues that attitudes are precursors to intentions, which are antecedent to behaviors (Azjen, 1991). More specifically, attitudes have a behavioral component (along with affective and cognitive components) that consists of behavioral intentions and predispositions to act in a particular way toward some subject (Shaver, 1987). Research has shown that intentions play an important role in understanding the entrepreneurial process (Shapero and Sokol 1982; Krueger, 1993; Krueger and Brazeal, 1994). Shapero and Sokol (1982) found that attitudes are linked with entrepreneurial intentions in perceived feasibility and desirability, and are partly derived from prior exposure to entrepreneurial activities. Later research by Krueger (1993) and Krueger and Brazeal (1994) supported Shapero's propositions about entrepreneurial intentions. Krueger (1993) found that prior entrepreneurial

exposure impacted intentions through perceived feasibility and the positive level of past experiences influenced perceived desirability to start a new venture. The entrepreneurial intentions framework developed by Krueger and Brazeal (1994) proposed that entrepreneurial characteristics could be learned and often vary based on personal characteristics and situations.

Since attitudes can be learned and changed, it is plausible to study the influence of one's experiences on an individual's attitudes towards entrepreneurship (Robinson et al., 1991; Hatten and Ruhland, 1995; Minniti and Bygrave, 2003; Politis, 2005). Gatewood et al. (2002) found that individuals receiving positive feedback concerning their entrepreneurial abilities had higher entrepreneurial expectations about starting a business. Other studies have shown that education and skill differentials can help explain why certain individuals choose to pursue entrepreneurial activities and why some entrepreneurs are more successful than others (Farmer, 1997; Carter, Gartner, Shaver, and Gatewood, 2003).

The number of entrepreneurship programs at colleges and universities is steadily on the rise, reflecting the continued growth of entrepreneurial activities and the belief that entrepreneurial skills can be learned (Kuratko, 2005; Matlay, 2005). Many institutions now house entrepreneurial centers and offer various concentrations in entrepreneurship and small business management. One of the more established programs is the Small Business Institute® (SBI), initiated in 1972 through a cooperative agreement between the United States Small Business Administration (SBA) and select colleges and universities. Currently, the SBI operates independently of the SBA and is generally housed in business schools throughout the United States. The primary objective of the program is to provide students an opportunity to work in a field-based project with local business owners, allowing students to offer managerial and technical assistance. Although not all of the participating businesses would be categorized as entrepreneurial in the sense of having substantial growth potential and high risk, most owners match the definition of "entrepreneur" in that they are people who have organized a business, and now operate and assume the risk for the business venture (entrepreneur, n.d.). Student teams develop consulting reports tailored around each client's most pressing needs. Interestingly, past research has shown that the business owners who participate in these types of assistance programs typically gain advantages over other establishments (Chrisman, 1999), and that outside assistance often has a positive influence on a venture's long-term ability to "survive, grow, and innovate" (Chrisman and McMullan, 2000).

Hatten and Ruhland (1995) used the EAO model to examine the entrepreneurial attitudes of students in the SBI over a decade ago. Based on a sample from multiple universities, Hatten and Ruhland found that students who possessed an internal locus of control developed a more positive attitude toward entrepreneurship after participation in the program. However, no other significant differences were found among the other scales of the EAO. In addition, no differences were evident based on the demographic variables of gender, parent(s) as entrepreneur(s), work experience, years of work experience, grade expected, or degree requirements.

HYPOTHESES

All attitudes, including entrepreneurial attitudes, can change (Robinson et al., 1991), and exposure to entrepreneurial role models and entrepreneurial activities can play a significant role in shaping these attitudes. This exposure may take the form of starting a business, working for a small or family business, or participation in entrepreneurship educational programs. Past studies have shown that entrepreneurship education (Gatewood et al., 2002) can have a positive impact on perceptions of new venture feasibility and desirability. As such, we hypothesize:

Hypothesis 1: Entrepreneurial attitudes of business students will strengthen as a result of completing a semester-long SBI course.

Although Hatten and Ruhland found no link between demographic characteristics and entrepreneurial attitudes, a study of African American college students found that male students had a more positive attitude toward entrepreneurship courses that did their female counterparts (Ede, Panigrahi, and Calcich 1998). In addition, other research has suggested that females (Hisrich and Brush, 1987; Carter, 2000; Thomas, 2001) and minorities (Kourilsky and Esfandiari, 1997; Heilman and Chen, 2003) are faced with greater obstacles when engaging in entrepreneurial activities, such as lower levels of education and managerial experience, lower self-efficacy, less access to resources, and fewer mentors and advisors. Research has also indicated that women and minorities tend to be less optimistic overall in their expectations of business success (Carter, 2000), and are more likely to fail when starting a new venture (Carter, Williams, and Reynolds, 1997; Boden and Nucci, 2000; Robb, 2002).

As indicated in the 2005 Report on Women and Entrepreneurship from the Global Entrepreneurship Monitor, there can be "no mistaking the gender gap that exists between women and men as they pursue new venture creation and business ownership." Nevertheless, many women and minorities are turning to entrepreneurial opportunities as a way to escape the corporate 'glass ceiling' (MacRae, 2005). Because entrepreneurship education has been lauded for its ability to help improve entrepreneurial drive and self-confidence (Gatewood et al., 2002; Florin, Karri and Rossiter (2007), we believe that participation in the SBI will likely have a greater impact on female and minority students. Therefore, we hypothesize:

Hypothesis 2: Completion of an SBI course will interact with demographic characteristics such that both women and ethnic minorities will experience a greater strengthening of entrepreneurial attitudes than will men and Caucasians, respectively.

METHOD

Participants

Participants were individuals enrolled in a Small Business Institute® undergraduate course at one of six universities (universities are not specified as participants were promised confidentiality). The institutions included in the study represented a variety of geographical regions, including the Northeast, Southeast, Southwest, and Midwest areas of the United States; all six universities were comparably represented within the sample. The pre-test survey was completed by 216 students and the post-test survey was completed by 142 students who had completed a university sponsored SBI course in the preceding months and represented a subset of the original 216 respondents. Approximately half of the participants were male in both groups (50.9% of pretest participants and 45.1% of post-test participants; samples not significantly different from one another, $t(355) = -1.08$, $p > .05$), and a large percentage of the participant population was Caucasian (80.1 % and 79.6%, respectively; samples not significantly different from one another, $t(356) = -.12$, $p > .05$). Participants ranged in age from 19 to 61 years old, with an average age of 24.3 years (23.8 and 25.1 years, respectively; samples not significantly different from one another, $t(356) = -1.89$, $p > .05$).

Procedure

Faculty members teaching undergraduate courses as part of the SBI program received an e-mail letter from the national secretary of the SBI and the research team requesting their voluntary participation in a study conducted by the researchers. The stated purpose of the study was to assess the role that demographic characteristics and exposure to entrepreneurial training in the

form of the SBI course might play in entrepreneurial attitudes and attitude development. Faculty were asked to request that their students complete an anonymous online survey during the first two weeks of the semester. Survey completion was entirely voluntary and no identifying information was recorded that would allow one to determine who had or had not completed the survey. A reminder e-mail was sent out after the first week had passed to encourage participation. The exact same procedure was followed at the completion of the SBI course with faculty requesting students to once again complete survey.

Measures

We measured entrepreneurial attitudes with the Entrepreneurial Attitudes Orientation survey instrument (Robinson et al., 1991). The EAO is theoretically well grounded and provides a composite score based on four attitude subscales. The subscales of the EAO measure individuals' attitudes on four constructs: (1) Achievement in business (Cronbach's alpha = .84; referring to the results of starting and growing a business venture), (2) Innovation in business (Cronbach's alpha = .90; using innovative methods in business activities), (3) Perceived personal control of business outcomes (Cronbach's alpha = .70; individual's control and influence on his/her business), and (4) Perceived self-esteem in business (Cronbach's alpha = .73; self-confidence and perceived competency in business affairs). The EAO has participants respond using a 10-point Likert-type scale to items in terms of how much they agree with the statement. Examples of items include: "I believe that in order to succeed, one must conform in accepted business practices," "I enjoy being able to use old business concepts in new ways," and "I've often created the business opportunities I have taken advantage of." Utilizing a sample of 54 entrepreneurs and 57 non-entrepreneurs, Robinson et al. found that the four subscales were able to accurately predict entrepreneur classification in 77% of cases (1991).

In addition to completing the EAO, participants provided demographic information including gender, and ethnicity. Due to large inequities in sample size, all ethnic groups except Caucasian were collectively categorized as "other ethnicity."

Analyses

Although the primary interest of the study was to examine the impact that completing a semester-long SBI course had on entrepreneurial attitudes, the interactive influence of gender and ethnicity on any possible change was also of interest. An initial t-test was performed to compare entrepreneurial attitudes pre-SBI course completion and post course completion. Following this, a three-way analysis of variance was conducted to test the interactive effects of gender, ethnicity, and completion of an undergraduate SBI course on each of the entrepreneurial attitudes measured by the EAO.

RESULTS

The means and standard deviations for entrepreneurial achievement, entrepreneurial innovation, entrepreneurial personal control, and entrepreneurial self-esteem pre- and post-SBI course completion are presented in Table 1. The means and standard deviations as functions of course completion, gender, and ethnicity are presented in Tables 2 through 5, respectively.

Scores on all four of the entrepreneurial attitudes were found to strengthen as a result of completing a semester-long SBI course. A significant change was found for entrepreneurial achievement ($t(356) = -1.98$; $p < .05$), entrepreneurial innovation ($t(356) = -2.61$; $p < .05$), entrepreneurial personal control ($t(356) = -3.03$; $p < .05$), and for entrepreneurial self-esteem ($t(356) = -12.16$; $p < .05$), therefore indicating that entrepreneurial attitudes are subject to change as a result of exposure to entrepreneurial education, supporting

Hypothesis 1.

Table 1 - Means and Standard Deviations for all Entrepreneurial Attitudes

Entrepreneurial Attitude	SBI Completion	Mean	Std. Deviation	Significance
Achievement Scale Score	Pre SBI Results	7.6987	.95336	
	Post SBI Results	7.9352	1.30493	$p < .05$
Innovation Scale Score	Pre SBI Results	6.9001	.88891	
	Post SBI Results	7.2302	1.50321	$p < .05$
Personal Control Scale Score	Pre SBI Results	6.5945	.89097	
	Post SBI Results	6.9261	1.17315	$p < .05$
Self Esteem Scale Score	Pre SBI Results	5.7573	.95516	
	Post SBI Results	7.0252	.98009	$p < .05$

Table 2 - Means and Standard Deviations for Entrepreneurial Achievement

Gender	SBI Completion	Ethnicity	Mean	Std. Deviation
Male	Pre SBI Results	Caucasian	7.8315	.96887
		Other Ethnicity	7.8032	1.30279
		Total	7.8269	1.02397
	Post SBI Results	Caucasian	7.4943	1.21878
		Other Ethnicity	7.5641	1.50073
		Total	7.5085	1.26834
Female	Pre SBI Results	Caucasian	7.4516	.79872
		Other Ethnicity	7.9350	.95607
		Total	7.5656	.85878
	Post SBI Results	Caucasian	8.1378	1.23724
		Other Ethnicity	8.8568	1.08290
		Total	8.2853	1.23552

Table 3 - Means and Standard Deviations for Entrepreneurial Innovation

Gender	SBI Completion	Ethnicity	Mean	Std. Deviation
Male	Pre SBI Results	Caucasian	7.0552	.92982
		Other Ethnicity	7.1603	.98882
		Total	7.0724	.93585
	Post SBI Results	Caucasian	7.0083	1.49651
		Other Ethnicity	6.9882	1.72937
		Total	7.0042	1.53204

Table 3 - Continued

Gender	SBI Completion	Ethnicity	Mean	Std. Deviation
Female	Pre SBI Results	Caucasian	6.6182	.75508
		Other Ethnicity	7.0554	.87812
		Total	6.7213	.80338
	Post SBI Results	Caucasian	7.2816	1.47807
		Other Ethnicity	7.9351	1.31886
		Total	7.4157	1.46291

Table 4 - Means and Standard Deviations for Entrepreneurial Personal Control

Gender	SBI Completion	Ethnicity	Mean	Std. Deviation
Male	Pre SBI Results	Caucasian	6.7237	.91278
		Other Ethnicity	6.6343	.95064
		Total	6.7091	.91522
	Post SBI Results	Caucasian	6.6716	.93666
		Other Ethnicity	6.5705	1.17549
		Total	6.6510	.98039
Female	Pre SBI Results	Caucasian	6.3611	.75668
		Other Ethnicity	6.8467	1.04324
		Total	6.4756	.85317
	Post SBI Results	Caucasian	7.0215	1.26462
		Other Ethnicity	7.6563	1.21139
		Total	7.1517	1.27254

Table 5 - Means and Standard Deviations for Entrepreneurial Self-Esteem

Gender	SBI Completion	Ethnicity	Mean	Std. Deviation
Male	Pre SBI Results	Caucasian	5.7717	1.13608
		Other Ethnicity	5.7302	.77419
		Total	5.7649	1.08225
	Post SBI Results	Caucasian	6.7311	.96791
		Other Ethnicity	6.9011	1.10869
		Total	6.7656	.99117
Female	Pre SBI Results	Caucasian	5.7125	.77903
		Other Ethnicity	5.8686	.90037
		Total	5.7493	.80754
	Post SBI Results	Caucasian	7.2131	.84510
		Other Ethnicity	7.3348	1.20958

	Total	7.2381	.92372

For entrepreneurial achievement, the results of the ANOVA indicated significant main effects for gender ($F(1) = 8.49$; $p < .05$, partial $\eta^2 = .024$), ethnicity ($F(1) = 4.61$, $p < .05$; partial $\eta^2 = .013$), and completion of the SBI course ($F(1) = 4.39$; $p < .05$, partial $\eta^2 = .022$). A significant interaction was found between gender and completion of the SBI course ($F(1) = 14.22$; $p < .05$; partial $\eta^2 = .039$), but not between ethnicity and completion of the SBI course ($F(1) = .332$; $p > .05$; partial $\eta^2 = .001$). No significant three-way interaction was present ($F(1) = .056$; $p > .05$, partial $\eta^2 = .000$). As can be seen in Figure 1, women's entrepreneurial achievement scores were significantly increased by completing a semester long SBI course, however, men's scores were not positively impacted; this supports Hypothesis 2. Figure 2 depicts the lack of significant interaction (contrary to Hypothesis 2) between ethnicity and course completion on entrepreneurial achievement scores.

For entrepreneurial innovation, the results of the ANOVA indicated significant main effects for SBI course completion ($F(1) = 4.47$; $p < .05$, partial $\eta^2 = .013$), but not for ethnicity ($F(1) = 3.53$, $p > .05$; partial $\eta^2 = .010$), nor gender ($F(1) = 1.18$; $p > .05$; partial $\eta^2 = .003$). A significant interaction was found between gender and completion of the SBI course ($F(1) = 7.92$; $p < .05$; partial $\eta^2 = .022$), but not between ethnicity and completion of the SBI course ($F(1) = .021$; $p > .05$; partial $\eta^2 = .000$). No significant three-way interaction was present ($F(1) = .298$; $p > .05$; partial $\eta^2 = .001$). As can be seen in Figure 3, women's entrepreneurial innovation scores were significantly increased by completing a semester-long SBI course; however, men's scores were not positively impacted. Figure 4 shows the lack of significant interaction between course completion and ethnicity. The results for entrepreneurial innovation are therefore the same as for entrepreneurial achievement in regard to partially supporting Hypothesis 2. For entrepreneurial self control, the results of the ANOVA indicated significant main effects for SBI course completion ($F(1) = 6.36$; $p < .05$; partial $\eta^2 = .018$) and gender ($F(1) = 5.73$; $p < .05$; partial $\eta^2 = .016$), but not for ethnicity ($F(1) = 3.00$; $p > .05$; partial $\eta^2 = .008$). As with the preceding entrepreneurial attitudes, a significant interaction was found between gender and completion of the SBI course ($F(1) = 8.73$; $p < .05$; partial $\eta^2 = .024$), but not between ethnicity and completion of the SBI course ($F(1) = .066$; $p > .05$; partial $\eta^2 = .000$). No significant three-way interaction was present ($F(1) = .090$; $p > .05$; partial $\eta^2 = .000$). As can be seen in Figure 5, women's entrepreneurial personal control scores were significantly increased by completing a semester long SBI course; however, men's scores were not positively impacted. Figure 6 depicts the lack of significant interaction between ethnicity and course completion on entrepreneurial personal control scores.

For entrepreneurial self-esteem, the results of the ANOVA indicated a significant main effect for SBI course completion ($F(1) = 95.85$; $p < .05$; partial $\eta^2 = .215$), a marginally significant effect for gender ($F(1) = 3.37$; $p < .06$; partial $\eta^2 = .010$), but no significant effect for ethnicity ($F(1) = .609$; $p > .05$; partial $\eta^2 = .002$). No significant interaction was found between gender and completion of the SBI course ($F(1) = 2.58$; $p > .05$; partial $\eta^2 = .007$), nor between ethnicity and completion of the SBI course ($F(1) = .116$; $p > .05$; partial $\eta^2 = .000$). No significant three-way interaction was present ($F(1) = .223$; $p > .05$; partial $\eta^2 = .001$). No significant statistical support for Hypothesis 2 was found for the entrepreneurial attitude of self-esteem. As can be seen in Figure 7, the trend of women's attitudes being more strongly impacted by completing the SBI course is continued; however, not to a statistically significant degree. Figure 8 depicts the lack of significant interaction between ethnicity and course completion on entrepreneurial self-esteem scores.

DISCUSSION

The primary interest of this study was to exa-

Figure 1 - Interaction between gender and completion of SBI course on Achievement Score

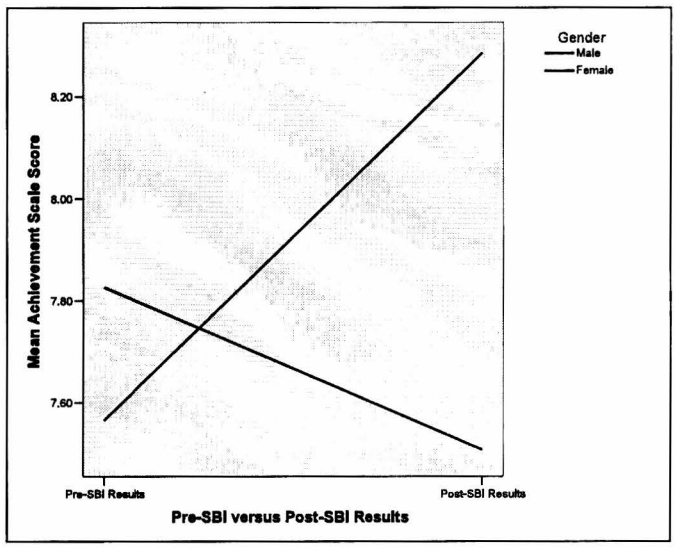


Figure 2 - Interaction between ethnicity and completion of SBI course on Achievement Score

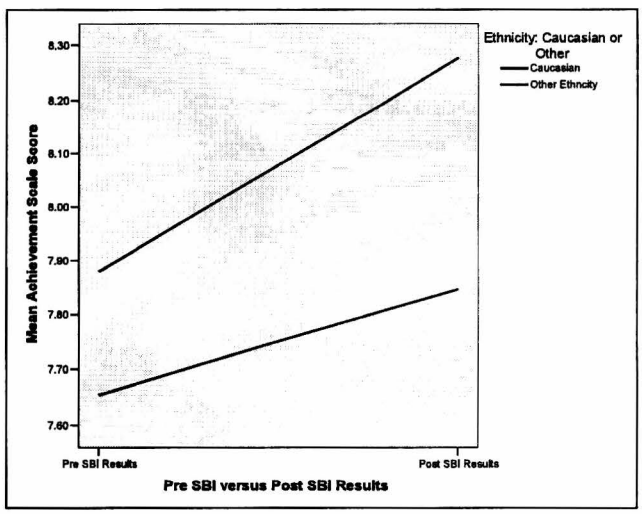


Figure 3 - Interaction between gender and completion of SBI course on Innovation Score

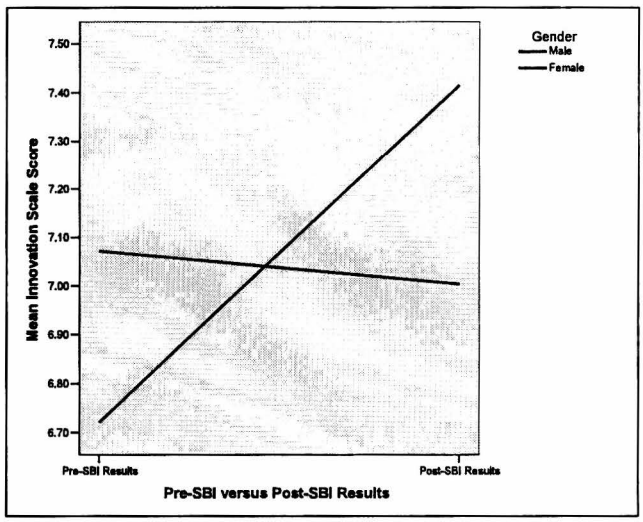


Figure 4 - Interaction between ethnicity and completion of SBI course on Innovation Score

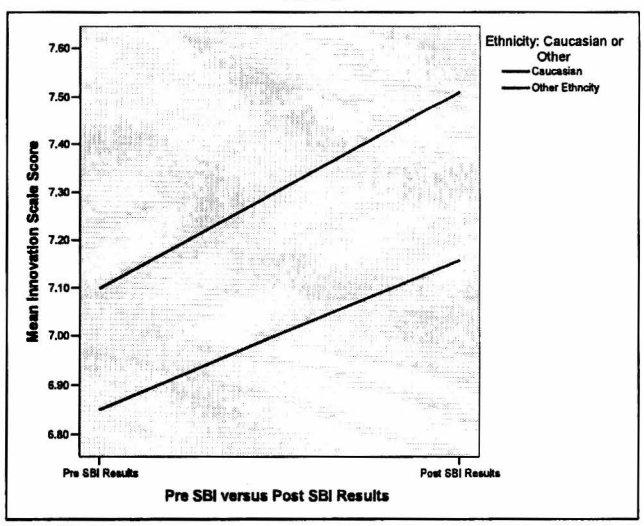


Figure 5 - Interaction between gender and completion of SBI course on Personal Control Score

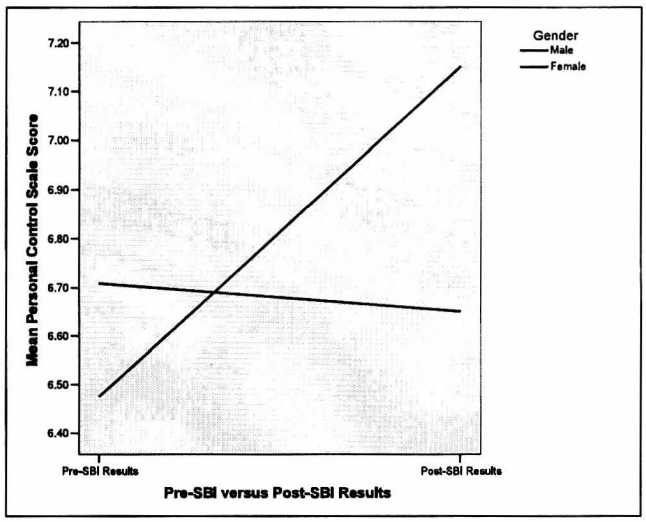


Figure 6 - Interaction between ethnicity and completion of SBI course on Personal Control Score

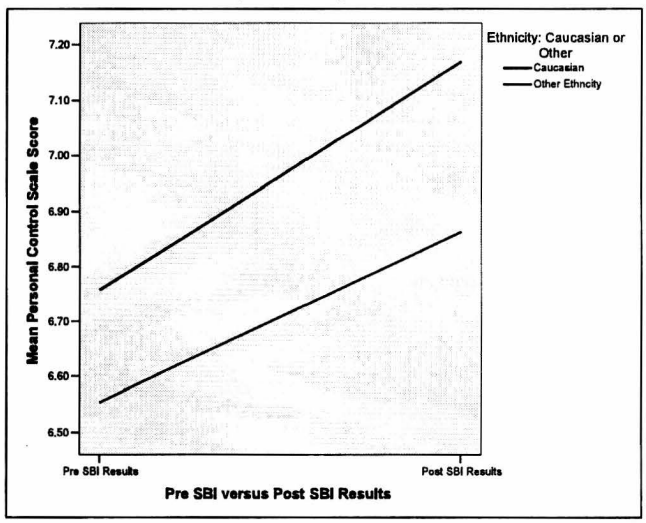


Figure 7 - Interaction between gender and completion of SBI course on Self Esteem Score

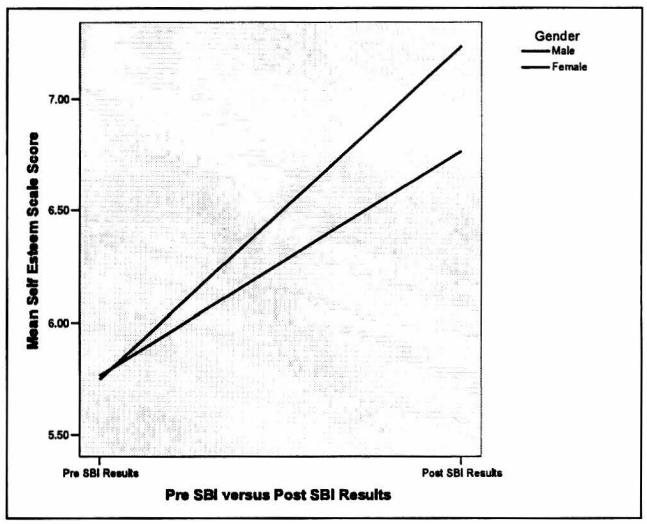
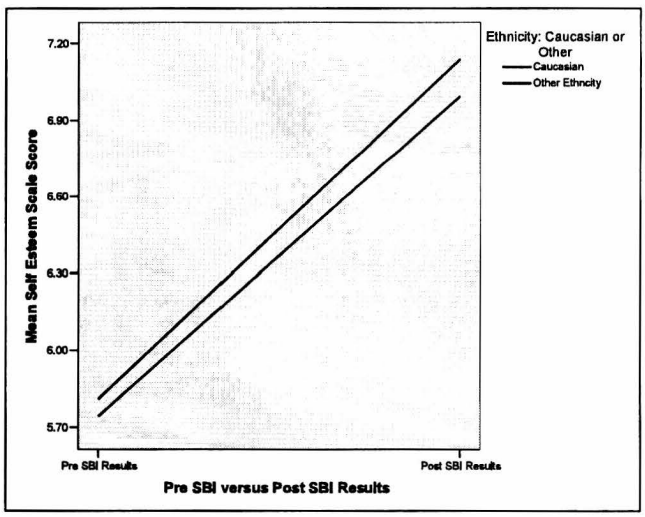


Figure 8 - Interaction between ethnicity and completion of SBI course on Self Esteem Score



mine the impact that completing a semester-long SBI course had on entrepreneurial attitudes while also considering the influence of gender and ethnicity on any possible attitudinal change. Completion of the SBI course and its interaction with gender were both found to play roles in entrepreneurial attitudes.

The results strongly supported the notion that completion of the SBI course had a major impact on entrepreneurial attitudes. For each of the entrepreneurial attitudes, significant increases in attitudinal strength were obtained post-SBI course, thus supporting Hypothesis 1. One possible explanation for this stems from how attitudes are developed. Attitudes are believed to be dynamic, changing across time and situations as the result of experiences. As suggested in prior research (Robinson et al., 1991; Hatten and Ruhland, 1995), attitudes about entrepreneurship can be more easily measured and influenced than personality. An extension of this comes from the work of Gatewood et al. (2002) who found that individuals receiving positive feedback about their entrepreneurial abilities had higher entrepreneurial expectations about starting a business. Additionally, research has indicated that educational programs, especially those which include hands-on outside-the-classroom entrepreneurial activities, and proper faculty guidance can help enhance students' self-efficacy (Florin, Karri, and Rossiter, 2007). Hence, completion of the SBI course may not only better equip students to become entrepreneurs via skill attainment, but may also increase their expectations of success.

Results also indicated that completion of a SBI course acts in conjunction with other factors to differentially impact entrepreneurial attitudes. However, Hypothesis 2 was only partially supported. For three of the four attitudes, a significant interaction effect was found such that women's attitudes were strengthened significantly more than men's were by completing the SBI course. For the fourth attitude, entrepreneurial self-esteem, the trend was consistent with women experiencing a greater strengthening of this attitude, but not at a statistically significant level. These findings are noteworthy since more women are starting to view entrepreneurship as a viable career option (MacRae, 2005). It also helps discredit the prior claim by Ede, Panigrahi, and Calcich (1998) that because instruction in business schools tends to be male-dominated, a gender-biased effect on students' attitudes towards entrepreneurship curriculum develops. Rather, our results clearly indicate that participation in entrepreneurship education can help substantially improve the entrepreneurial attitudes of female students thereby possibly reducing any real or perceived gender gap. Our findings further lend credibility to the work of Menzies, Diochon, and Gasse (2004) who encourage more females to take courses that better prepare them for business ownership.

Contrary to expectations, no significant interaction effects were found for completion of the SBI course and ethnicity. However, ethnic minorities did possess somewhat stronger attitudes post-course completion, simply not at a statistically significant level. Hence, without a significantly larger sample of minority students, and in light of previous research findings, it would be inappropriate to not assume that some level of practical significance was gained by these students completing the SBI course. It should also be noted that ethnic minorities in the current study possessed uniformly stronger entrepreneurial attitudes than did Caucasians both pre- and post-SBI course completion. This may very well indicate that the growing trend of minority venture creation and minority-owned businesses has already impacted the attitudes of students in a positive manner. Exposure to entrepreneurial activities need not come in the form of a college course in order to change attitudes. Because the number of business owners who are ethnic minorities continues to grow, this is a ripe area for further investigation and future research.

A primary objective of this study was to determine if evidence existed supporting the value of entrepreneurship education programs such as the SBI. The results of our study expand upon the work of Hatten and Ruhland (1995), and further suggest that nurturing students, especially women and non-Caucasian ethnic groups, through educational programs may produce more successful entrepreneurs. Research shows that entrepreneurs, particularly women and minorities, need support networks that can help them build confidence and better understand entry barriers so they can envision themselves as viable candidates for entrepreneurial business enterprises (Brindley, 2005). Participation in the SBI and similar programs can provide that type of developmental experience, since students have direct exposure to the entrepreneurial process, as well as contact with potential role models and mentors.

Our findings indicate that the experiences gained from entrepreneurial exposure can be critically important to the development of positive attitudes towards entrepreneurship. As suggested by Kuratko (2005), certain facets of entrepreneurship can be taught and an "*entrepreneurial perspective*" can be developed in individuals. Similarly, Florin, Karri, and Rossiter (2007) believe that a primary focus of entrepreneurship teaching and learning is the development of positive attitudes. The SBI program can not only help students strengthen their entrepreneurial attitudes, but also equip them with the necessary skill sets to create and maintain a successful new business venture.

CONCLUSIONS AND FUTURE RESEARCH

Because one's attitudes are likely to lead to one's intentions, and these, in turn, to behaviors, future research should continue to consider what factors are related to and may impact entrepreneurial attitudes. For example, research has shown that both work experience with a small business (Peterman and Kennedy, 2003) and a family business (Reitan, 1997) can have a positive impact on an individual's perceptions regarding new venture feasibility and desirability. Similarly, Gibson and Harris (in press) found that students who had either worked for a small business enterprise in the past or came from a family with a small business were more likely to have stronger entrepreneurial attitudes as measured by EAO than their peers who lacked this previous experience.

Although Hatten and Ruhland (1995) examined the entrepreneurial attitudes of SBI students in the 1990s, no follow-up studies were conducted in over a decade. The results of their study showed that students with a higher internal locus of control developed a more positive attitude of entrepreneurship after completing the program, but no other significant differences were found. Our findings significantly expanded on this by showing that all students' attitudes were positively impacted by completing a semester-long SBI program, and that the impact of course completion was especially pronounced for women. Future studies should focus more intently on this very unique population, with an emphasis on both female and ethnic minority populations, as it is composed of students that have specifically chosen to enroll in a course that is geared toward learning how to effectively develop and manage a business venture. As such, these students may be more likely to consider entrepreneurship as a career choice. While we are unable to predict whether or not these individuals will start an entrepreneurial venture, and if so when, these types of students may be critically important to the many small and medium-sized businesses that constantly struggle to find talented employees. According to Hornsby and Kuratko (2003), the human resource practices of small businesses have stagnated and declined over the past decade, making it very difficult to attract talented employees. However, studies have shown that recent college graduates are often attracted to small and medium-sized businesses because they can offer diverse job responsibilities that can help them grow

professionally and develop new marketable skills (Moy and Lee, 2002; Grubb, Harris, and MacKenzie, 2006). An influx of young professionals with an entrepreneurial mindset can help many promising businesses better resolve their managerial challenges and successfully compete against larger competitors in the marketplace. Small and medium-sized businesses should consider targeting their recruiting efforts toward graduates with experiential learning experiences in order to benefit from their diverse skill set and entrepreneurial perspective.

The current study is not without limitations, which should be considered when interpreting the results obtained here, and which provide direction for future research endeavors. For example, the current study was unable to utilize age as a potential control variable in the analyses due the fact that our sample of college-age students was of a highly uniform age demographic (although there did exist a few outliers who were significantly older than the norm). Another potential issue is the fact that the teaching curriculum and instructional perspectives cannot be assumed to have been consistent across the six different universities. However, follow-up correspondence with these individuals indicates that they were likely highly comparable; each course was named similarly and relied upon a consulting-based curriculum where students interacted with small business owners in their communities. Instructors also indicated that the majority of these organizations were relatively new businesses, and as such an entrepreneurial perspective was commonly adopted.

Also of interest is the relationship between entrepreneurial attitudes and entrepreneurial aptitude. For many individuals, positive attitudes are associated with behaviors that they are skilled at and vice-versa. An examination of this linkage would provide insight into improving the educational experiences of those seeking training related to starting and running an entrepreneurial enterprise. Likewise, student intent to undertake an entrepreneurial initiative was not measured but may provide valuable insight into existing entrepreneurial attitudes. Future research should also consider the entrepreneurial attitudes of students and other nascent entrepreneurs in countries outside the United States. Many countries are beginning to emphasize the importance of entrepreneurship; consideration of the educational practices related to business development in emerging countries will only strengthen our understanding of the global nature of entrepreneurial efforts and further promote new venture creation on a global scale.

In summary, the entrepreneurial sector is likely to be the primary source of future employment for many countries. Specifically, these types of ventures are expected to provide approximately 75% of the future net jobs added to the American economy (Small Business Administration, 2006). In addition, Acs, Tarpley, and Phillips (1998) suggest that entrepreneurship is an important vehicle in allowing minorities and women to enter the economic and social mainstream of American society. As this entrepreneurial spirit continues to flourish, an understanding of the factors that promote it is necessary. The present examination of attitudes associated with entrepreneurship helps us understand one small part of this equation.

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